Safety Data Sheet
acc. to OSHA HCS

Print Date 04/24/2015 Revision Date 04/24/2015

· **Product Identifier**
· **Trade Name:** UR3010 CLEAR A
· **Application of the Substance or Mixture:** Polyols

· **Details of the Supplier of the Safety Data Sheet (SDS)**
· **Manufacturer or Supplier:**
Resinlab, LLC
N109 W13300 Ellsworth Drive,
Germantown, WI 53022
1-800-388-8605
www.resinlab.com
· **Information Department:** Product Safety Department: msds@resinlab.com
· **Emergency Telephone Number:**
North America - Chemtrec: 1-800-424-9300 (24 hours)
International - Chemtrec: 01-703-527-3887 (24 hours)

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2 Hazard(s) identification

· **Hazard Classification**

GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

Eye Dam. 2B H320 Causes eye irritation.

· **Label Elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Pictogram(s)**

GHS08

· **Signal Word** Warning

· **Hazard-determining Component(s)**
2,2'-Methylenebis(4-methyl-6-tert-butylphenol)
· **Hazard statements**
Causes eye irritation.
Suspected of damaging fertility or the unborn child.

· **Precautionary statements**
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Prevention**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.

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· **Hazard Rating System**
· **NFPA System**
· **NFPA Ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 0

NFPA special hazards (water reactivity and oxidizing property): None

· **HMIS System**
· **HMIS Ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical Characterization: Mixtures**

· Composition/Information on Ingredients			
CAS: 8001-79-4 EINECS: 232-293-8 RTECS: FI 4100000	Castor oil	Eye Irrit. 2A, H319	80-90%
CAS: 3077-13-2 EINECS: 221-360-7	1,1'-phenyliminodipropan-2-ol	Eye Irrit. 2A, H319	10-20%
CAS: 119-47-1 EINECS: 204-327-1	2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	Repr. 2, H361 Aquatic Chronic 4, H413	≤1%

· **Classification System:**
The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

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4 First-aid measures

· **Description of First Aid Measures**
· **General Information**
Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

· **After Inhalation**
Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing.
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.

· **After Skin Contact**
Gently wash contaminated skin with water.
Remove all contaminated clothing and wash before reuse.
Seek medical treatment in case of complaints.

· **After Eye Contact**
Rinse opened eyes under running water for at least 15 minutes.

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Remove contact lenses if present and easy to do so; continue rinsing.
Seek medical treatment in case of complaints.

· **After Swallowing**
If victim is unconscious; never give anything by mouth.
If victim is conscious; rinse out mouth and give victim small amounts of water.
Seek medical treatment in case of complaints.

· **After Exposure** Seek medical treatment in case of complaints.

· **Information for Doctor** Have chemical containers, labels and/or (M)SDS ready when calling or visiting a medical center.
· **Indication of any Immediate Medical Attention and Special Treatment Needed**
After frequent or high intense exposure, the following medical tests are recommended:
Reproductive system function tests
Check section 11 Toxicological Information for further relevant information.

· **Additional Information**
For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.

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5 Fire-fighting measures

· **Extinguishing Media**
· **Suitable Extinguishing Agent(s)**
Use fire fighting measures and extinguishing agents that suit the environment.
In case of fire, suitable extinguishing agents are:
Alcohol resistant foam.
Dry chemical or fire-extinguishing powder.
Carbon dioxide (CO_2).
Water spray or water fog.
· **Unsuitable Extinguishing Agent(s)** No relevant information.

· **Firefighting Procedures**
Isolate fire and deny unnecessary entry.
Eliminate all ignition sources if safe to do so.
Do not extinguish fire unless flow can be stopped.
Fight fire remotely due to the risk of explosion.
Burning liquids may be moved by flushing with water; protect personnel and minimize property damage.
Fight fire from protected location or safe distance.
Contain fire water runoff if possible to prevent environmental pollution.

· **Special Hazards Arising in Fire**
Will not burn unless preheated.
In case of fire, following can be released:
pyrolysis products
Formaldehyde, a skin and lung sensitizer and a regulated carcinogen, may be formed during fires.
Silicon oxide (SiO_2)
ethers
hydrocarbons
ketones
alcohols
Carbon dioxide (CO_2) and Carbon monoxide (CO)
Nitrogen oxides

· **Advice for Firefighters**
If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).
As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

· **Additional Information** Ensure adequate and functional fire fighting facilities equipped in working area at all times.

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6 Accidental release measures

· **Personal Precautions**
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.
Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.

· **Environmental Precautions** No further relevant information.

· **Cleaning Up Methods**
Ensure adequate ventilation.
Eliminate all ignition sources.
Keep unauthorized personnel away.
For large spills:
Shut off source of leak if safe to do so.
Dike and contain.
Remove with vacuum trucks or pump to storage/salvage vessels.
Allow molten product to cool.
Absorb residues with liquid-binding materials.
For small spills:
Ventilate and wash area after clean-up is complete.
Collect spills in suitable and properly labeled containers.
Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.
Dispose contaminated chemicals as waste according to Section 13.

· **Additional Information** No further relevant information.

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7 Handling and storage

· **Handling**
· **Precautions for Safe Handling**
Obtain special instruction before use; do not handle until all safety precautions have been read and understood.
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.
Wear respiratory protection when handling.
Keep away from incompatible material(s).
Avoid any release into the environment.
Observe all the personal protection requirements in Section 8.
· **Information about Protection Against Explosions and Fires**
Will not burn unless preheated.
Keep away from heat, sparks, open flame and other ignition sources during handling.

· **Storage**
· **Requirements to be Met by Storerooms and Receptacles**
Store in a well-ventilated place; provide ventilation for receptacles.
Keep stored in accordance with local, regional, national, and international regulations.
· **Information about Storage in One Common Storage Facility**
Store away from incompatible material(s).
Store away from foodstuffs.
Avoid release to the environment.

· **Additional Information** No further relevant information.

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8 Exposure controls/personal protection

· **Engineering Measures or Controls**

· **Exposure Limit Values that Require Monitoring at the Workplace**	
8001-79-4 Castor oil	
TEEL-1	Short-term value: 125 mg/m³
TEEL-2	Short-term value: 500 mg/m³

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TEEL-3	Short-term value: 500 mg/m³
77-58-7 Dibutyltin dilaurate	
PEL	Long-term value: 0.1 mg/m³ as Sn
REL	Long-term value: 0.1 mg/m³ as Sn, Skin
TLV	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ as Sn; Skin

· **Other Engineering Measures or Controls**
Ventilation rates should be matched to conditions.
If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

· **Personal Protective**

· **General Protective and Hygienic Measures**
Do not eat, drink or smoke during work.
Keep food, drink or feed away from working area.
Contaminated work clothing is not allowed out of workplace.
Clean hands and exposed skin thoroughly after work and before breaks.

· **Personal Protective Equipment (PPE)**

· **Breathing Equipment**
Caution! Improper use of respirators is dangerous.
In case of brief exposure or low pollution, use a respiratory filter device.
In case of intensive or longer exposure, use a positive-pressure respiratory protective device that is independent of circulating air.

· **Hand Protection**

Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.
Suggested glove type(s):
Nitrile Gloves
Butyl Rubber Gloves

· **Eye Protection**

Safety glasses

· **Body Protection** No relevant information.

· **Additional Information**
All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work.
The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

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9 Physical and chemical properties

· **Information on Basic Physical and Chemical Properties**

· **Appearance:**

· **Form:**	Liquid
· **Color:**	Amber
· **Odor:**	Faint
· **Odor Threshold:**	Not determined.

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· **PH-Value:**	Not determined.
· **Change in Condition:**	
· **Melting Point:**	Not determined.
· **Boiling Point:**	>187 °C (>369 °F)
· **Flash Point:**	>163 °C (>325 °F)
· **Decomposition Temperature:**	Not determined.
· **Flammability:**	Not determined.
· **Explosion:**	Not determined.
· **Explosion Limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Vapor Pressure:**	Not determined.
· **Density at 25 °C (77 °F):**	0.97 g/cm³ (8.095 lbs/gal)
· **Solubility in or Miscibility with**	
· **Water:**	Not miscible or difficult to mix.
· **Viscosity:**	
· **Dynamic at 20 °C (68 °F):**	1000 mPas
· **Kinematic:**	Not determined.
· **Additional Information**	No further relevant information.

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10 Stability and reactivity

· **Physical Hazard(s)** Not a regulated reactive or physical hazard under GHS.

· **Hazardous Reactivity and Chemical Stability** Stable under normal conditions of use, storage and temperatures.

· **Thermal Decomposition and Conditions to be Avoided**
Keep away from incompatible material(s).
Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.

· **Possibility of Other Hazardous Reaction(s)** May generate flammable hydrogen (H_2) in contact with alkali metals and hydrides.

· **Incompatible Material(s)**
Oxidizing agents
Isocyanates
Acids
Bases (Alkalis)
Oxidizing acids

· **Hazardous Decomposition Product(s)**
Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.

· **Hazardous Polymerization Product(s)** No relevant information.

· **Additional Information** No further relevant information.

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11 Toxicological information

For detailed Toxilogical Information please email the Product Safety Department.

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· Acute Toxicity

· Oral

8001-79-4 Castor oil		
Oral	LD50	(Human) (Probable oral lethal dose=5000-15000 mg/kg) Reference: NLM HSDB (2011).
3077-13-2 1,1'-phenyliminodipropan-2-ol		
Oral	LD50	3800 mg/kg (rat) Reference: Dow (M)SDS (2004).
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)		
Oral	LD50	(rat) (LD0 ≥ 5000 mg/kg; no death occurred) Reference: ECHA (2011).

· **Potential Health Effect(s):**
While not a classified acute oral hazard, the product may cause the following symptom(s):
diarrhea
abnormal pain, headache, nausea, vomiting, drowsiness

· Dermal

8001-79-4 Castor oil		
Dermal	LD50	(Test species: n/a) (Toxicity not expected based on acute oral data)
3077-13-2 1,1'-phenyliminodipropan-2-ol		
Dermal	LD50	> 2000 mg/kg (rabbit) Reference: Dow (M)SDS (2004).
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)		
Dermal	LD50	(rabbit) (LD0 ≥ 10000 mg/kg; no death occurred) No mortality or any clinical signs of toxicities observed at 10000 mg/kg bw. Reference: ECHA (2011).

· **Potential Health Effect(s):** Not a classified acute dermal hazard.

· Inhalative

8001-79-4 Castor oil		
Inhalative	LC50/4 h	(Test species: n/a) (Toxicity not expected based on acute oral data)
3077-13-2 1,1'-phenyliminodipropan-2-ol		
Inhalative	LC50/4 h	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)		
Inhalative	LC50/4 h	(No data available)

· **Potential Health Effect(s):** No further relevant information; classification is not possible.

· Skin Corrosion or Irritation

8001-79-4 Castor oil	
Corrosion/Irritation	slightly irrit. (Human) (After 0.05g neat substance to males) 0.05 g neat substance applied to skin of the back of 50 adult male volunteers for 48 hours induced irritating scores ranging from negative to bullous. The substance was classified as mildly irritating to human skin (Category 3) for safety reason. Reference: NLM HSDB (2011).
3077-13-2 1,1'-phenyliminodipropan-2-ol	
Corrosion/Irritation	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
Corrosion/Irritation	not irritating (rabbit) (OECD TG 404) Primary dermal irritation index (24+48+72 hours) = 0/6 (Max. 6; mean score of all treated animals); the substance was not irritating to rabbit skin. Reference: ECHA (2011).

· **Potential Health Effect(s):** No further relevant information; classification is not possible.

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· Eye Serious Damage or Irritation

8001-79-4 Castor oil	
Damage/Irritation	slightly irrit. (Human) (mild discomfort and minor epithelial changes found) Daily application of the substance to eyes of 9 patients for 15 days resulted in mild and transient discomfort and minor epithelial changes. The substance was therefore classified as mildly irritating to human eyes (Category 2B). Reference: NLM HSDB (2011).
3077-13-2 1,1'-phenyliminodipropan-2-ol	
Damage/Irritation	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
Damage/Irritation	not irritating (rabbit) (OECD TG 405) Cornea and Iris: 0 (mean score of all treated animals; time point: 24+48+72 hours) Conjunctivae: 1/3 (Max. 3; 2 out of 3 animals; time point: 24 hours; fully reversible in 72 hours) Conjunctivae: 0/3 (Max. 3; 1 out of 3 animals; time point: 24+48+72 hours) The substance was not irritating to rabbit eyes based on the classification criteria. Reference: ECHA (2011).

· Potential Health Effect(s):
Causes eye irritation.
In contact with eye, may cause:
redness and pain
unlikely to cause corneal injuries

· Respiratory or Skin Sensitization

8001-79-4 Castor oil		
Sensitization	Skin	sensitizing (Human) (clear hyperchromasia observed after 10 days) Undiluted substance which was daily applied to test fields delineated on the right thigh of three males (22 to 31 years old) less than 30 seconds for 10 days resulted in macroscopic and microscopic skin changes including clear hyperchromasia, an increase in the number of cells in the basal cell layer, slight widening of the granular cell layer. For safety reason, the substance was classified as a skin sensitizer to humans (Category 1). Reference: NLM HSDB (2011).
	Respiratory	(No data available)
3077-13-2 1,1'-phenyliminodipropan-2-ol		
Sensitization	Skin	(No data available)
	Respiratory	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)		
Sensitization	Skin	not sensitizing (mouse) (OECD TG 429) Stimulation index (Negative controlled group with 0% of the substance): 1.00 Stimulation index (Treated groups with 2%, 10% and 50% of the substance): 1.17, 1.16 and 1.22 respectively. The substance was not classified as a dermal sensitizer to mice due to insignificant differences between the controlled and treated groups. Reference: ECHA (2011).
	Respiratory	(No data available)

· Potential Health Effect(s): No relevant information for respiratory sensitization; classification is not possible.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Germ Cell Mutagenicity

8001-79-4 Castor oil	
Mutagenicity	negative (salmonella typhimurium) (In Vitro (AMEs test; TA 97, 98, 1535 strains)) Reference: CCRIS (2011).
3077-13-2 1,1'-phenyliminodipropan-2-ol	
Mutagenicity	(No data available)

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119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
Mutagenicity	negative (Chinese Hamster) In Vitro (mammalian cell gene mutation assay of Chinese hamster lung fibroblasts (V79) with OECD TG 476) - negative with and without metabolic activation In Vitro (mammalian chromosome aberration test of Chinese hamster lung cell line (CHL/IU) with OECD TG 473) - negative with and without metabolic activation (mouse) In Vivo (oral with 5000 mg/kg; time point: at 24+48+72 hours; micronucleus assay of mouse NMRI strains with OECD TG 474) - negative; no significant increase of micronucleated polychromatic erythrocytes was observed. Reference: ECHA (2011).

· **Potential Health Effect(s):** No further relevant information; classification is not possible.

· Carcinogenicity

8001-79-4 Castor oil	
Carcinogenicity	negative (mouse) (no tumor found after 20 week dermal doses) After dermal semiweekly application of the substance for 20 weeks, no tumor was observed. Reference: NLM HSDB.
3077-13-2 1,1'-phenyliminodipropan-2-ol	
Carcinogenicity	negative (Test species: n/a) (not listed as a Carcinogen by NTP, IARC or OSHA)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
Carcinogenicity	(Test species: n/a) Not listed as a carcinogen according to ACGIH, IARC, NTP, or OSHA.

· **Potential Health Effect(s):** Not a known Carcinogen.

· Reproductive Toxicity

8001-79-4 Castor oil	
Reproductive Toxi.	negative (Human) (No statistically reproductive toxicity observed) A 33-year-old pregnant female (at week 40 of gestation) appeared cardiopulmonary arrest due to amniotic fluid embolism within 60 min of ingestion of the substance. However, classification was not possible due to statistical insignificance of the case. (rats and mice) There was little or no evidence of any reproductive toxicity in the treated animals observed after repeated oral administration of 10% solution of the substance for 13 weeks. Reference: NLM HSDB (2011).
3077-13-2 1,1'-phenyliminodipropan-2-ol	
Reproductive Toxi.	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
Reproductive Toxi.	N/A (rat) (OECD TG 421; oral with up to 800 mg/kg bw/day) LOAEL (P Generation; male rats) = 50 mg/kg bw/day with effects including giant cell formation in testes, decreased sperm motility ratios, decreased sperms in epididymis cauda, and increased abnormal sperm ratios. LOAEL (P Generation; female rats) = 200 mg/kg bw/day with effects including decreased body weight gain, lower food consumption, decreased number of corpora lutea, decreased number of implantation scars, and decreased number of pup born. Based on the effects, the substance was classified as a Category 2 reproductive hazard by ECHA. However, the substance was not listed by California 65, or NLM Toxnet. Specific effect: decrease of absolute and relative testis weight; histopathological testis lesions; atrophy and degeneration of testicular tubules; arrest of spermatogenesis in addition to decrease in sperm motility, viability and sperm number; epididepididymis hypospermia; Route of exposure ORAL

· **Potential Health Effect(s):** Suspected of damaging fertility or the unborn child.

· Specific Target Organ Toxicity - Single Exposure

8001-79-4 Castor oil	
STOT-Single	(Human) (Respiratory tract irritation via Inhalation) The substance caused respiratory tract irritation based on human evidence. Reference: NLM HSDB (2011).
3077-13-2 1,1'-phenyliminodipropan-2-ol	
STOT-Single	(No data available)

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119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
STOT-Single	(Test species listed below) Target organs: None (rat) - Diarrhea was observed after a single oral administration with 5000 mg/kg bw of the substance. (rabbit) - No mortality or any clinical signs of toxicities were observed after a single dermal application with 10000 mg/kg bw of the substance. However, the dose levels were both outside of the guidance value ranges. Reference: ECHA (2011).

· **Potential Health Effect(s):** No further relevant information; classification is not possible.

· **Specific Target Organ Toxicity - Repeated Exposure**	
8001-79-4 Castor oil	
STOT-Repeated	Target: None (Human) (After repeated inhalative exposure) 13 out of 28 employees (employment period varied from 2 months to 20 years; both males and females; 25 smokers) of a company involving importing, preparing, and distributing plant products of the substance exhibited symptoms including rhinitis, conjunctivitis, asthma, itch, and/or urticaria. However, there was no evidence that the symptoms were the substance or their smoking relevant. Thus, it was not possible to make a classification without further information. Reference: NLM HSDB (2011).
3077-13-2 1,1'-phenyliminodipropan-2-ol	
STOT-Repeated	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
STOT-Repeated	N/A (rat) -LOAEL(oral; male rats) = 42.3 mg/kg bw/day with effects on livers (increased absolute and relative liver weights) and testicular system (decreased absolute and relative testicle weights, atrophy of testicular tubules, spermatogenic arrest, and epididymis hypospermia). -LOAEL(oral; female rats) = 54.2 mg/kg bw/day with effects on livers (increased absolute and relative liver weights). However, the effects were considered as conclusive but not sufficient for the classification. Reference: ECHA (2011).

· **Potential Health Effect(s):** No further relevant information; classification is not possible.

· **Aspiration Hazard**	
8001-79-4 Castor oil	
Aspiration Hazard	(No data available)
3077-13-2 1,1'-phenyliminodipropan-2-ol	
Aspiration Hazard	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
Aspiration Hazard	(No data available)

· **Potential Health Effect(s):** No relevant information; classification is not possible.

· **Additional Information** No further relevant information.

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12 Ecological information

· **Aquatic Environmental Toxicity**	
8001-79-4 Castor oil	
Algae Toxicity	(No data available)
Crustacean Toxicity	(No data available)
Fish Toxicity	(No data available)
3077-13-2 1,1'-phenyliminodipropan-2-ol	
Algae Toxicity	(No data available)
Crustacean Toxicity	(No data available)
Fish Toxicity	(No data available)
119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	
Algae Toxicity (static)	> 5 mg/l (Selenastrum capricornum) (EC50 (72 hr); biomass and growth rate; OECD TG 201)

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Crustacean Toxicity (static)	4.8 mg/l (Daphnia magna (water flea)) (EC0 (48 hrs); OECD TG 202; no death occurred) NOEC (21 days; OECD TG 211) = 0.34 mg/L
Fish Toxicity	5 mg/l (Oryzias latipes (Rice fish)) (LC0 (96 hrs); OECD TG 203) No toxic symptoms or death occurred. Based on the poor water solubility (7E-6 g/L at 20℃) and the non-rapid degradability, the substance is classified as a Chronic-4 aquatic environmental hazard for safety reason. Reference: ECHA (2011).

· **Aquatic Environmental Toxicity Assessment:** No relevant information; classification is not possible.

· Degradability and Stability

8001-79-4 Castor oil

Biodegradation	(No data available)
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	2.54E-10 cm³/molecule-sec (OH radical) Reference: NLM HSDB (2011).
Stability in water	(No data available)

3077-13-2 1,1'-phenyliminodipropan-2-ol

Biodegradation	(No data available)
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	(No data available)
Stability in water	(No data available)

119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)

Biodegradation	(Test species: n/a) (OECD TG 301C; chemical conc. 100 mg/L; 4 weeks) Biodegradation (Direct from HPLC) = 1% Biodegradation (Indirect from BOD) = 0% The substance is non-biodegradable. Reference: CHRIP (2011).
Persistence	(Test species: n/a) The substance is persistent. Reference: Canada DSL (2007).
Photodegradation	4.1E-11 cm³/molecule-sec (OH radical) (Calculated by AOP) Half-life = 9.4 hours Reference: ECHA (2011).
Stability in water	(No data available)

· Bioaccumulation and Distribution

8001-79-4 Castor oil

BCF	(Test species: n/a) (The substance is not bioaccumulative) Reference: Canada DSL (2007).
Koc	(No data available)
LogPow	(No data available)

3077-13-2 1,1'-phenyliminodipropan-2-ol

BCF	(Test species: n/a) (The substance is not bioaccumulative) Reference: Canada DSL (2007).
Koc	(No data available)
LogPow	(No data available)

119-47-1 2,2'-Methylenebis(4-methyl-6-tert-butylphenol)

BCF	(Cyprinus carpio) BCF (Chemical conc. 2 µg/L; 60 days) = 710 BCF (Chemical conc. 0.2 µg/L; 60 days) = 490 The substance is low bioaccumulative in aquatic environment. Reference: CHRIP (2011).
Koc	150000 L/kg (Test species: n/a) (Calculated from LogPow of 6.25 and LogKoc = 0.81 X LogPow + 0.1) Reference: ECHA (2011).
LogPow	6.25 (Test species: n/a) (OECD TG 107; 20 ℃) Reference: ECHA (2011).

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· **Degradability and Bioaccumulation Assessment:** No further relevant information; assessment is not possible.

· **Additional Information** No further relevant information.

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13 Disposal considerations

· **Hazardous Waste List**

· **Description:** It may be necessary to contain and dispose of the substance/mixture as a hazardous waste.

· **Waste Treatment Recommendation:**
Generation of waste should be avoided or minimized wherever possible.
Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage.
Dispose of contents/containers in accordance with local, regional, national, and international regulations.

· **Unused and Uncontaminated Packagings**

· **Recommendation** Dispose of according to your local waste regulations.

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14 Transport information

· **UN-Number**	Not regulated for transport; not applicable.
· **Transport hazard class(es)**	Not regulated for transport; not applicable.
· **Packing group**	Not regulated for transport; not applicable.
· **Environmental Hazards:**	Not applicable.
· **Special Precautions:**	Not applicable.
· **Transport in Bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional Information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	-

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15 Regulatory information

· **USA Regulation Lists**

· **SARA (Superfund Amendments and Reauthorization Act of 1986)**

· **Section 302 (Extremely Hazardous Substances)**

None of the ingredients is listed.

· **Section 313 (Toxics Release Inventory (TRI) reporting)**

None of the ingredients is listed.

· **Section 311/312 (Hazardous Chemical Inventory Reporting)**

119-47-1	2,2'-Methylenebis(4-methyl-6-tert-butylphenol)	A	≤1%

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65**

· **Chemicals Known to Cause Cancer**

None of the ingredients is listed.

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· **Chemicals Known to Cause Reproductive Toxicity for Females**

None of the ingredients is listed.

· **Chemicals Known to Cause Reproductive Toxicity for Males**

None of the ingredients is listed.

· **Chemicals Known to Cause Developmental Toxicity**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value Established by ACGIH)**

77-58-7	Dibutyltin dilaurate	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **International Regulation Lists**

· **Canadian Domestic Substance Listings:**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

8001-79-4	Castor oil
119-47-1	2,2'-Methylenebis(4-methyl-6-tert-butylphenol)

· **Chinese Chemical Inventory of Existing Chemical Substances:**

All ingredients are listed.

· **Japanese Existing and New Chemical Substance List:**

3077-13-2	1,1'-phenyliminodipropan-2-ol
119-47-1	2,2'-Methylenebis(4-methyl-6-tert-butylphenol)
3648-20-2	Diundecyl phthalate (DUP)
77-58-7	Dibutyltin dilaurate
63148-62-9	Polydimethylsiloxane
1843-03-4	Phenol, 4,4',4"-(1-mrthyl-1-propanyl-3-ylidene)tris[2-(1,1-dimethylethyl)-5-methyl-

· **Korean Existing Chemical Inventory:**

All ingredients are listed.

· **European Pre-registered substances:**

All ingredients are listed.

· **REACh - Substances of Very High Concern (SVHC) List:**

None of the ingredients is listed.

· **Restriction of Hazardous Substances Directive (RoHS) list:**

None of the ingredients is listed.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department Issuing (M)SDS:** Product Safety Department
· **Contact:** msds@resinlab.com

· **Abbreviations and acronyms:**
ACGIH: American Conference of Governmental Industrial Hygienists
ACToR: US EPA Aggregated Computational Toxicology Resource
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road
BCF: Bioconcentration Factor
CAS: Chemical Abstracts Service (division of the American Chemical Society)
CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System
CHRIP: Japan NITE Information on Biodegradation and Bioconcentration of the Existing Chemical Substances in the Chemical Risk Information Platform
DOT: US Department of Transportation
DSL: Canada Domestic Substance List
ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH
HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System
HSDB: US NLM TOXNET Hazardous Substances Databank
HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database
IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)
IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)
ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)
ICSC: International Chemical Safety Cards
IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)
IUCLID: EU REACh International Uniform Chemical Information Database
Koc: Partition coefficient, soil Organic Carbon to water
LC50/LD50: Lethal Concentration/Dose, 50 percent
N/a: Not available or Not applicable
NFPA: US National Fire Protection Association
NIOSH: US National Institute of Occupational Safety and Health
NITE: National Institute of Technology and Evaluation, Japan
NLM TOXNET: US National Library of Medicine Toxicology Data Network
OECD: Organisation for Economic Co-operation and Development
OSHA: US Occupational Safety and Health Administration
P: Marine Pollutant
RCRA: Resource Conservation and Recovery Act (USA)
REACh: EU Registry, Evaluation and Authorisation of Chemicals
RID: the Regulations Concerning the International Carriage of Dangerous Goods by Rail; published by the Central Office for International Carriage by Rail (OTIF)
RTDG: the Recommendations on the Transport of Dangerous Goods by United Nations (UN)
RTECS: US Registry of Toxic Effects of Chemical Substances
SARA: US Superfund Amendments and Reauthorization Act
SIDS: OECD existing chemicals Screening Information Data Sets
SVHC: EU ECHA Substance of Very High Concern
TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)
TOXLINE: US NLM bibliographic database search system
TSCA: US Toxic Substance Control Act
ESIS: European Chemical Substances Information System

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